

US EPA ARCHIVE DOCUMENT

**USDA-EPA Committee to Advise on Reassessment and Transition  
Draft Meeting Summary  
Radisson Hotel Old Town  
Alexandria, VA  
October 11 - 12, 2000**

**WEDNESDAY, October 11, 2000**

John Ehrmann, Meridian Institute opened the second meeting of the EPA-USDA Committee to Advise on Reassessment and Transition (CARAT)<sup>1</sup>, which is a subcommittee under the auspices of EPA's National Advisory Council for Environmental Policy and Technology (NACEPT) operating under the ground rules of the Federal Advisory Committee Act, through the NACEPT main charter. Dr. Ehrmann initiated a round of introductions before turning to the Co-Chairs of the CARAT for opening remarks.

**Opening Remarks**

Richard Rominger, Deputy Secretary, U.S. Department of Agriculture (USDA), began the meeting by welcoming returning and new members of the CARAT. Mr. Rominger expressed appreciation for the time and effort CARAT members contributed to the process and stated that this effort would make a difference and result in moving the process forward. He took the opportunity to observe that U.S. agriculture produces the safest, most abundant food in the world, and the Food Quality Protection Act (FQPA) is intended to build on that. Mr. Rominger also observed that there are other factors influencing agriculture including the fact that President Clinton and the American public raised the standards for food safety in the U.S. Food safety is now the focus of top researchers and regulators.

Mr. Rominger commented that FQPA is a good but tough law and that, as evidenced by some of the successes of the Tolerance Reassessment Advisory Committee (TRAC), he is committed to working with the U.S. Environmental Protection Agency (EPA) to make sure the agricultural perspective is considered in its implementation. He stated that pest management is a top priority to USDA, as reflected in some of the recent grant decisions on related research in FY 2000. Mr. Rominger stressed the importance of USDA and EPA continuing to work together to provide the work leadership necessary to address some of the uncertainty and the tight schedule imposed by FQPA. He reflected on the successes of the collaborative work to date including the public participation process, which, through greater involvement by stakeholders, has resulted in better decisions on risk and risk mitigation. Mr. Rominger recognized the collaboration between the IR-4 program and EPA Registration Division on making new tools available for some of the minor crops. He thanked EPA for their partnership in working collaboratively on a challenging but essential and evolving process.

Michael McCabe, Acting Deputy Administrator, EPA, thanked Mr. Rominger for his comments and was also appreciative of the effort USDA put into the partnership and the expertise they brought to the FQPA implementation process. Mr. McCabe looked forward to the discussions at the meeting on both progress and process. He acknowledged the commitment and diversity of perspectives CARAT members brought to the process and stated that these insights help EPA and USDA do a better job implementing FQPA. Mr. McCabe emphasized that CARAT was not the only venue for input, and noted a series of meetings EPA

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<sup>1</sup> A copy of the transcript for the meeting is available on the US Environmental Protection Agency (EPA) web site at <http://www.epa.gov/pesticides/carat/>. Also available on the web page is a list of Committee Members and meeting materials.

held on production, Rodenticide and other issues; conference calls on pesticides; meetings on worker protection, spray drift, cumulative risk, and drinking water; and direct contact with interested and concerned individuals. He stressed that, through approaches like these and CARAT, EPA increased the transparency and improved the quality of their decision-making. Mr. McCabe noted that EPA bases its decisions on sound science; utilizes a transparent and open decision-making process; and is on track to complete its review of organophosphates (OPs) by the end of the year. He observed that through processes like CARAT, TRAC, and the Science Advisory Panel (SAP), the public is provided with the opportunity to contribute. At the same time, he acknowledged that some CARAT members would like additional opportunities for public participation and looked forward to discussing this concern later in the meeting.

Mr. McCabe took a moment to review some of EPA's progress as a result of FQPA. He commented that more than half of the new registrations have been for safer chemicals. The registration of new pesticides and uses of existing pesticides has resulted in providing growers with 2,400 additional small crop uses. He stated that their work with USDA has helped them move forward with FQPA and has changed the way EPA does business. In addition to providing more accurate, real-world data, USDA is working with EPA on making major decisions and preserving critical uses. At the same time, Mr. McCabe noted that there was a lot of work ahead including continuing to protect children, refining the cumulative risk assessment process, and progressing with transition. He thanked CARAT members for their commitment and commented that he looked forward to working with them in the future.

### **Review of Agenda and Groundrules**

Following the opening remarks, Dr. Ehrmann described the agenda for the day and reviewed the groundrules for the meeting. He reflected on Meridian's recommendations to EPA and USDA on a public involvement process based on input from TRAC members at the conclusion of the TRAC process. Acknowledging that there were a number of fora addressing issues related to the work of CARAT, rather than form standing committees or work groups, it would be more effective to form committees of prescribed duration to focus on discrete issues or to hold workshops and other opportunities for public interaction. Dr. Ehrmann reiterated that the Co-Chairs would be open to discussing different opportunities like these for involvement of CARAT members.

After the opening remarks, one CARAT member expressed concern about the member's ability to provide advice to EPA and USDA based on the structure of the agenda for the meeting. He was supportive of using ad hoc work groups, in addition to CARAT meetings, as a way for members to provide additional input on a number of critical issues over the two-year duration of CARAT. Potential topics for work groups were transition, cumulative risk, drinking water, and residential and occupational risk. Another member suggested mechanisms for education, particularly for educating farmers on what the alternative technologies are as a topic for a work group.

### **Status of New Product Registration**

Lois Rossi, Director, Special Review and Registration Division, Office of Pesticide Programs (OPP)/EPA, provided the group with an update on reregistration and tolerance reassessments with an emphasis on OPs. Ms. Rossi referred CARAT members to the handout, *Status of Organophosphates in the Pilot Process, October 11, 2000* and *FY 200 Pesticide Reregistration and Tolerance Reassessment Summary*, as she described the status of various OPs in the different phases of the pilot process. In her presentation she noted that EPA also made decisions on five non-OPs using a three-phase interim process designed to increase transparency and public participation. Ms. Rossi explained that, ultimately, all pesticides would

be subject to the six-phase public participation process. Ms. Rossi also highlighted the additional outreach adopted by EPA and USDA of inviting conference calls with stakeholders to help make decisions on pesticides. Additional details on her presentation are in the transcript of the meeting, which is available along with copies of the documents on the EPA web site at <http://www.epa.gov/pesticides/carat/>.

Following Ms. Rossi's presentation, the group discussed several issues. One individual commented that a good topic for a work group would be worker risk because worker risk issues like reentry intervals are not being addressed in other venues. She also requested a status on probabilistic risk assessments for workers. Margaret Stasikowski, Director, Health Effects Division (HED), OPP/EPA responded that her division was looking at a plan for improvements in the risk assessment process and CARAT will hear more about this in the future. Another individual wanted clarification on whether EPA's approach to determining mitigation measures to address worker exposure included input from the grower community or worker protection groups. Ms. Rossi explained EPA used a range of options after completing the risk assessment. Based on the results of the assessment, EPA identifies feasible actions to reduce risk and solicits input on how they would work on conference calls with people in the field. In addition, they work on these issues with the Worker Protection Branch. The individual suggested that EPA work with commodity and worker protection groups for additional insight, on this issue.

Other participants commented on the stakeholder conference call process. Many felt the calls were an effective way of providing input. Several members were perplexed about the disposition of unresolved issues following the closure calls. One individual felt that the effectiveness of the conference calls would be limited with regard to cumulative risk. Another member observed that a number of the calls provided input from the grower community, and suggested that comparable calls be held with farm worker representatives. In a similar vein, an individual observed that active ingredient registrants and end users were underrepresented and may not have been directly informed about the calls. It was noted that, since it is a proprietary business license of the registrant, there is a role for the registrant to advise its end users of related matters. Some CARAT members were concerned about the timing of the calls, particularly because a number of them occurred in the last two weeks of the fiscal year – a busy time for agriculture. It was clarified that, as these were closure calls, stakeholders had other earlier opportunities to provide input – either on earlier calls or in some other format. In addition, it was recognized that the end of the fiscal year deadline often creates a flurry of activity within the last 4 – 6 weeks of the year.

Several CARAT members commented on the schedule for completing OP and non-OP Interim Reregistration Eligibility Decisions (IREDs) and REDs in 2000 and 2001. Ms. Rossi reviewed the statistics for completion and explained that EPA would probably focus on completing OPs in 2000 and non-OPs including carbamates, triazenes and carcinogens would be addressed in 2001. In response to a query on the public process for no-OPs, Ms. Rossi explained that the process was put out for comment last year and would be finalized soon. She noted that it was a six-phase process that takes about 11 months. In the mean while, to maintain reregistration goal, EPA is using an interim process.

### **Registration Activities**

Jim Jones, OPP/EPA, provided CARAT members with an overview of pesticide registration activities in OPP on antimicrobials, biopesticides, and synthetic chemicals. For his presentation, Mr. Jones referenced Paper 2-1 *Registration Update Conventional Pesticide Registration Program*, and Paper 2-2 *Expediting the Review of Alternatives to the Organophosphates (OPs)*. He also described a 'straw proposal' which is presented in Paper 2-3 *Office of Pesticide Programs' September 27, 2000 Presentation to the FIFRA*

*Scientific Advisory Panel of a Pilot Hazard Assessment of Selected Organophosphates.* The purpose of the proposal was to address some of the frustration from the user community on the lack of experimental use permits (EUPs) by providing a program for EUPs targeted at pesticides that are already registered to minimize paper work and expedite the permitting process. In addition, Mr. Jones referenced a complementary joint effort with CPDR, IR-4 and EPA where CPDR provides the residue reviews to establish new uses. Copies of the papers and a detailed transcript of his presentation are available on the EPA web site.

After the presentation, CARAT members asked the following clarifying questions.

- ▶ What is the purpose of the straw proposal? The proposal was developed to bypass the conventional priority system for petitions for new uses and allow EPA to establish a tolerance for EUPs in the range of 2000 acres without using up the priorities for new uses.
- ▶ What is the policy value of EUPs? EUPs provide an opportunity for users to develop field information on how new chemicals are effectively used.
- ▶ What are the registered alternatives for methyl bromine for? They include soil fumigants and herbicides.
- ▶ How many of the Section 18's are repeats? Approximately 2/3 from last year.
- ▶ How are the resources in OPP split between registration and reregistration? This information will be provided in the discussion on the budget.
- ▶ Will there be any changes in the way Section 18's are done this year? EPA will work on some changes in the Section 18 process.

#### **USDA Pest Management Grants**

Allen Jennings, Office of Pest Management/USDA, summarized USDA's grants related to pest management in FY 2000 that originate at the Cooperative State Research, Education, and Extension Service (CREES). Some of the programs described include Crops at Risk (CAR), and Risk Avoidance and Mitigation Program (RAMP), and a one-time program, Initiative for Future Agriculture and Food Systems (IFAFS). Mr. Jennings noted that the key criteria for grant selection were relevancy and scientific quality. Copies of the papers and a detailed transcript of his presentation are available on the EPA web site at <http://www.epa.gov/pesticides/carat/>.

The group discussed how the current USDA grant profile compared to the pre-FQPA profile. One individual wanted to understand more about how minor crops are addressed in the current pest management scheme. It was noted that new grant programs were added since the passage of FQPA, however additional information on an aggregate figure since 1996 was not available at the time of the meeting and would be provided the second day of the meeting. The individual also felt it was important for CARAT members to have a sense of how USDA prioritized FQPA.

Several participants were interested in the criteria used for grant selection and how the selection panel weighted the science and the relevancy review. Mr. Jennings indicated that information on the criteria and the review process was available and offered to provide it to the CARAT. He also asked CARAT members for input on the idea of combining, rather than separating the science and relevancy review in the distribution of 406 funds for crops at risk, RAMP and methyl bromide. He received no comments at the meeting. One participant observed that no non-governmental organizations (NGOs) were funded by USDA grants. Mr. Jennings noted that not all grants are open to the public, however through the request for proposals process, USDA hoped to involve NGOs and others more in the grant process. Another individual wanted clarification on the challenge process on what does and does not receive funding during



the grant making process. Therese Murtagh, Office of Pest Management, USDA, explained that some programs are not challenged but those that are challenged undergo a scientific and relevancy rating. If a program is not deemed relevant, it is unlikely to be approved based on scientific merit alone. Keith Pitts, Special Assistant to the Deputy Secretary, USDA, added that there is an evaluation process required for each of the grants as well.

An individual observed that because there are so many programs in USDA dealing with pesticides it is difficult for the public to discern what USDA is doing and what its priorities are. She suggested that a summary of USDA activities and their priorities would be helpful. Mr. Pitts acknowledged this concern and explained that, in regard to FQPA implementation, USDA will probably continue to focus on IR-4, crops at risk, the regional pest management centers, and data collection.

The group discussed the impact of FQPA on the land grant system and the need for partnerships. One individual commented that it takes time to apply the changes in science to the field and that the resources are limited. In this regard, he observed the growing need for partnerships. The group was encouraged to partner with the land grant system, particularly in the area of pest management. Another individual felt there was an opportunity for more partnerships with the registrant community to take better advantage of their research.

The role of education and training was discussed. One individual observed that, while a significant amount of effort went into improving the regulatory process, there was relatively little effort going into education and training which have been integral to successful state regulation. Mr. Pitts acknowledged that both EPA and USDA under funded the budget for pesticide applicator training in the past. He explained that USDA has and is trying to address the need for such training through a line item of \$1.5 million dollars in their budget. He recognized that, while there is a record of success in their budgeting process, the process is evolving and USDA continues to work on obtaining adequate funding in this and other areas. Marcia Mulkey, Director, OPP/EPA, commented that most of the funding for training and education has been through EPA and, through a partnership reassessment that involved states, USDA and EPA, the reassessment of the certification and training program was complete and ready for implementation. She saw this as an opportunity for dialogue within the Executive Branch and with the Congress about funding and other ways to make a better program. Additional information on this will be provided to the CARAT.

#### **Update on USDA and EPA Budgets**

Drawing on the preceding discussion, Mr. Pitts referred members to a two-page document for his summary of USDA's budget for FY 2001. After making a couple of edits to some of the figures in the 2000 budget on the document, Mr. Pitts indicated that there was a 7.2 million dollar increase from the 2000 budget. He noted there were some increases in critical research programs, in addition to increases in the National Agricultural Statistics Survey, and \$120 million dollars for IFAFS, a competitive grants program. Mr. Pitts provided some detail about how these funds would be allocated and clarified that, while in the past this program was made broadly available, it will be limited to land grants during the next fiscal year. He also stated that funding for the national resource initiative was reduced to \$106 million dollars for the next fiscal year. A copy of his handout and a detailed transcript of his presentation are available on the EPA web site at <http://www.epa.gov/pesticides/carat/>.

Following Mr. Pitt's presentation the group asked clarifying questions. One individual observed that funding for organic farming was not evident in the budget. Mr. Pitts acknowledged this and commented that USDA needs to set up a workshop with stakeholders to talk about this, in addition to initiating applicator

training programs once the regional centers are established.

Jim Aidala then presented the status of the EPA budget. He indicated that the EPA budget was not as far along as the USDA budget. Mr. Aidala stated that the EPA President's budget request amounted to \$121 million dollars for OPP, which pays for 936 positions. He noted that \$75 million of the total is for FQPA activities – representing an \$8.5 million dollar increase from the previous budget for FQPA activities including agricultural partnership initiatives, screening and testing in FQPA for endocrine disruptors, registration of safer pesticides, tolerance reassessment under FQPA, and for the partnership environmental stewardship program for integrated pest management (IPM). Mr. Aidala added that EPA was also continuing its discussions with the regulated community regarding “fee for service” but he was doubtful that any action would be taken this year. He also indicated that EPA was working on the FQPA requirement to recover all of their tolerance setting associated activities, in anticipation of which the Office of Business Management (OMB) has set aside \$7 million dollars – thus representing a potential \$7 million dollar shortfall in the budget, depending on the outcome of the bill. In addition, Mr. Aidala referenced the upcoming loss of the maintenance fees at the end of FY 2001, which previously covered the cost of reviewing older pesticides – another loss of revenue to the program.

After Mr. Aidala's presentation, Stephen Johnson, Acting Deputy Assistant Administrator, EPA, took the opportunity to respond to a question on how the budget was divided between registration and reregistration activities. Mr. Johnson indicated that approximately 60 percent of the FTEs and 55 percent of the contract dollars support reregistration and tolerance reassessment, and 40 percent of the FTEs and 45 percent of the contract dollars are committed to registration.

One individual asked if the GAO criticism of EPA's oversight of the enforcement of the worker protection standard factored into the budgeting process? Ms. Mulkey noted that EPA's immediate response to that criticism was that it raises some issues and legitimate concerns. She referenced the joint reassessment with EPA's Office of Enforcement and Compliance of the Worker Protection Rule, which may result in budget initiatives as well as other responses. In addition, Ms. Mulkey noted that EPA is separately trying to understand more fully the issues with implementation.

#### **Update on Cumulative Risk**

Beth Doyle, OPP/EPA, provided the group with an update on the cumulative risk assessment process. In the highlights of her presentation, she explained EPA's progress on developing a risk assessment methodology, and summarized the public comments on the draft guidance document. Ms. Doyle also presented an overview of the results of the September SAP meeting on the pilot hazard and dose-response analysis of 24 OP pesticides, and next steps in the cumulative risk assessment process. A copy of the slides for her presentation and the paper that she co-authored with Dr. Vicki Dellarco are available, along with a detailed transcript of her presentation, on the EPA web site.

One participant asked for clarification on what EPA planned to submit to the SAP in December and what the timeline was following the SAP review. Ms. Doyle responded that they intend to take the same hazard data they submitted to SAP in September, using the Calindex model. She indicated that they intend to ask the SAP to focus on their guidance document versus which model they plan to use. Ms. Doyle added that they would integrate other exposure and water data as it becomes available to demonstrate the cumulative risk assessment at a later date. The timeline would be clearer following the SAP review.

Other CARAT members wanted to know more about next steps in the process following the SAP review in

December. Ms. Mulkey commented that once, through the science peer review process, EPA feels the assessment tool is useable, EPA will begin to use it. She indicated that the review process is sufficiently far along that, pending the outcome of the December SAP review, the model may be applied soon thereafter for preliminary cumulative risk assessment. A final, comprehensive tool will be available sometime in the future. Once the tool is available, Ms. Mulkey indicated that the results would be subject to a public review process that will be informed by what EPA and USDA have learned through the process for individual chemicals. The process has not been determined further.

Another individual requested clarification on the process for computer model validation. Ms. Doyle indicated that the models used are too complex to validate. However, EPA is considering checking the modeling results internally by comparing them to bio monitoring data, in addition to comparing the results of different models. More broadly, she indicated that EPA is evaluating the N-Haines process to provide the total exposure against which to compare. The participant was perplexed about how this process would be applied to validate a comprehensive cumulative risk assessment based on one component. Ms. Doyle reiterated that validation is not possible, consequently comparisons of different parts of the modeling results is performed.

The group discussed their concerns with using default assumptions in the model. Ms. Doyle explained that default assumptions are taken from the literature, limited data, or other secondary sources. For perspective, Ms. Mulkey added that, to some extent, assumptions are necessary under most circumstances – no matter how large the database from which you draw the assumption is. She observed that the real question is, in a given circumstance, when is it appropriate and scientifically sound to infer from the available data? Another individual noted that, because the cumulative risk process is complicated, refining the process would be iterative. For that reason, he called on EPA to let the stakeholder community know early on what data is needed so they can respond in a reasonable timeframe and help to keep the process moving.

A CARAT member noted that cumulative risk should be a work group topic.

#### **Update on Tolerance Revocation and Channels of Trade**

Jack Housenger, Associate Director of Special Review and Reregistration, OPP/EPA, presented an update on tolerance revocation and the channels of trade. He began by reviewing the definition of the channels of trade provision. Dr. Housenger then provided an update on one of the first pesticides to be subjected to the provision, methyl parathion, in 1999. In 1999 fruit and most vegetable uses of methyl parathion were cancelled because of dietary risks. Issuance of the proposed ruling was synchronized with the release of U.S. Food and Drug Administrations (FDA) guidance document on how the channels of trade provisions would be implemented. The proposal for revoked tolerances allowed for a 60-day comment period, during which EPA received comments from the European community on the timing of the revocation, and for others on whether tolerance revocation applied to voluntary cancellations and uses that did not contribute to dietary risk in the same way. Dr. Housenger noted that EPA plans to finalize the document for signature soon. He then turned to Dr. Terry Troxell, FDA, for an update on the final guidance on the channels of trade provisions.

Dr. Troxell clarified that the guidance document is only for methyl parathion and that, at this point, FDA does not have guidance on a general approach for the channels of trade provision because of the complexity of the food system. He explained that the law requires that producers and processors need to show that the pesticide was used in accordance with the registration prior to revocation. This is difficult and requires



many resources on the part of processors and producers and the EPA. Dr. Troxell commented that FDA would continue to try and develop a general approach to the provision, based on more experience with additional pesticides.

Several participants were concerned about the precedent set for other compounds by the EPA and FDA proposals for methyl parathion, because it would create problems in the use of products that would have been legal or the movement of products through trade channels. Of particular concern was the two-prong test to prove the proper use of the pesticide – a challenge and a resource drain for the processor. Mr. Troxell reiterated that the guidance document was only for methyl parathion. He also noted that the food system and channels of trade issue is complex and at some point, processors need to show that pesticides were used in accordance with the registration prior to revocation. In regard to the concern about setting a precedent, Ms. Mulkey added that this is the second proposal, the first of which was for propargite, which, although similar to the methyl parathion in some ways, was developed to address the particular circumstances.

Another individual commented that the generalized approach in the proposal did not adequately address the reality that there are different forms of a commodity, which as they are processed have different retention times and half-lives for the pesticide. In addition, the registrant does not produce decay curves, and the processor does not necessarily have the resources to produce this information. He stressed the importance of maintaining flexibility when developing the proposals for other pesticides.

One participant expressed concern about the interpretation of the channels of trade provision whereby a year and a half after cancellation, when six months after cancellation the tolerance revocation should be put into effect, detectable residues of methyl parathion will be assumed to result from lawful application for processed foods. Mr. Troxell acknowledged that concern and reiterated that this information was true, provided the food was packaged prior to July 1. He noted that, as a matter of practicality, this assumption is made because FDA does not have the resources to referee the complex system of commerce.

### **Update on Science Policies**

William Jordan, EPA, provided the group with an overview of the status of the science policies. For his presentation, he referred CARAT members to Paper 2-4 *FQPA Science Policy Issues and Related Papers*. In his presentation, Mr. Jordan noted that the last two of the 19 issue papers developed to address the science policy topics identified by the TRAC were issued for public comment. Mr. Jordan commented that EPA found the process of developing and completing the science policy papers so valuable that they chose to take advantage of the process and put additional papers through the science policy process. A copy of the Paper and the transcript of his presentation are available on the EPA web site.

After the presentation, CARAT members asked clarifying questions. One individual requested information on the schedule for SAP review of science policy papers. Mr. Jordan explained that EPA has continued to seek input from the SAP on selected issues including the technical part of the drinking water treatment paper and in December, EPA will talk to the SAP about cumulative risk assessments, particularly the exposure piece. He was not aware of any other specific plans for input from the SAP. Another participant asked if there were plans for a science paper on occupational risk. Ms. Mulkey explained that EPA was in the process of refining its approach to addressing occupational risk, and, in addition to considering a process for public input they were also evaluating whether to develop a science paper, hold a workshop or provide some other venue for additional input.

### **CARAT Feedback and Discussion on Updates**

Many CARAT members commented on the mornings' updates. One individual requested a status on how well FQPA implementation is protecting children, including the number of times the safety factor has been applied and the progress on developmental toxicity. Ms. Mulkey suggested that, to provide an adequate update, this issue should be considered as an agenda topic for the next CARAT meeting. Several CARAT members felt the agenda for the meeting focused on issue updates but did not offer sufficient opportunity for CARAT members to provide advice to EPA and USDA on critical issues like cumulative risk. They suggested using work groups to provide that opportunity and allow for members to dialogue and report back to the full CARAT with more refined ideas. Some of the issues they suggested as topics for work groups included residential risk, occupational risk, cumulative risk, and transition. Mr. McCabe acknowledged this concern and commented that the agenda reflected input from CARAT members on the issues of concern to them. He noted that there were other venues in which some of these issues were being addressed in greater detail, and that EPA and USDA were open to considering other ways to structure the CARAT meetings, including work groups.

One individual felt that there should be more formality to the closure calls and that the calls should have an explicit schedule. In this regard, he asked what EPA had learned from the pilot public participation process and what the status of finalizing the public participation process was? Ms. Mulkey responded that people generally did not take advantage of the opportunities to comment earlier on in the process during phases 3 and 5, but waited to provide input on the closure call. As a consequence, EPA was considering holding the conference calls earlier in the process during phase 5. Ms. Mulkey stated that EPA received and integrated all of the comments on the public participation process and was in the process of finalizing and posing the process to the Federal Register.

Another CARAT member reflected on Mr. McCabe's opening comments and requested clarification on the disposition of the food consumption study. He wanted to know if it was no longer funded and whether it was being transitioned into the N-Haines study? Mr. McCabe responded that there is a commitment on the part of EPA to join forces with the N-Haines process to preserve federal funding and take advantage of the potential for more information in regard to the relationship of diet and health. In response to an offer for help from the stakeholder community, Mr. McCabe commented that any help towards getting the funding for the consumption part of the N-Haines survey would be valuable.

Again, in regard to the earlier update on cumulative risk, one individual requested clarification on evaluating residential exposure and whether the evaluation was based on actual data or conservative assumptions. He was concerned that EPA was using default assumptions found in the residential Standard Operating Procedures (SOPs) instead of actual data. In this regard, he wanted to know when the stakeholder community would have the opportunity to provide the missing data? Ms. Mulkey explained that for chlorpyrifos, while SOPs were used for the residential exposure analysis, the analyses were highly refined. The participant also inquired when the Post-application Exposure Monitoring Guidelines would be finalized and available? It was noted that this year's work plan for the HED included the Guidelines as a priority project.

### **Examples of Transition "in the Field"**

Dr. Ehrmann introduced the first of a series of presenters on examples of transition "in the field." Brief summaries of their comments are presented below. The details of their presentations are in the transcript for the meeting, which is available along with copies of meeting materials or slides on the EPA web site.

***Lodi-Woodbridge Winegrape Commission's (LWWC) Integrated Farming Program***

Dr. Clifford Omart, Research/IPM Director, LWWC, provided the group with a presentation on LWWC's integrated farming program. He started his presentation with the observation that IPM is not implemented as widely as initially envisioned. In addition, Dr. Omart recognized that one of the challenges with transition has been getting information out to growers and doing it in a way that is effective. In this regard, he noted that the focus at LWWC is on implementation rather than transition. He then summarized the program at LWWC, including outreach/education, working with growers in the field, and producing a winegrowers workbook.

***Michigan State University – Michigan Peaches***

Dr. Larry Gutt, Michigan State University, gave a presentation on his work on Michigan peaches. His presentation included an overview of the challenges with peach production in Michigan, peach IPM, and the absence of OPs in peach production. Dr. Gutt also discussed some of the broader challenges to implementing IPM in fruit crops and about how to meet the challenges inherent with IPM in cherry, peach and apple production.

***Fresh Market Peach Production in New Jersey***

Dr. Peter Shearer, Extension Specialist in Tree Fruit Entomology, Rutgers Agricultural Research and Extension Center, provided the group with a status of New Jersey market peach production in light of the FQPA. Dr. Shearer touched on some of the key characteristics of the peach market in New Jersey, including common pests, pest control and the use of OPs and alternative products. He also highlighted grower's needs and emphasized the importance of having the time to perform necessary research to identify alternative pest control measures and to validate and implement alternatives.

***New Jersey Peaches, Apples and Blueberries***

Dean Folk, New Jersey Statewide Agricultural Agent, talked about IPM programs for fruit in New Jersey. He described how Agricultural Agents in New Jersey conduct an IPM program with peach, apple and blueberry growers in New Jersey. Mr. Folk explained the funding base for the program and stated that the funding is used to educate growers about IPM and promote the program. Growers receive information about the program through on-farm efforts, new letters and meetings. The IPM programs address pest complexes and diseases. In addition to education, the County program also involves field sampling and post-harvest analysis, and pesticide surveys.

***Southeastern Peach Industry***

Paul Gilibo, representing the Southeastern Peach Industry, talked about transition in the fresh peach industry for the 11 states in the southeast region of the U.S. He commented that the customer defines the quality of fresh peaches in the market. The industry currently uses OPs to control the primary pest, the plum calculeo, and many secondary pests. To transition from using OPs it will be necessary to develop a model that will accurately predict when the calculeo will be present and identify alternative pest control measures. Mr. Gilibo suggested it would take five or six years for the industry to reduce its reliance on OPs and that the process would be evolutionary.

***EPA Region IV***

Ms. Genene Gettle, EPA Region IV, provided the group with an overview of projects implemented by EPA Region IV through a diversity of grant mechanisms. One was the Arm project, which explored the impact of applying fewer pesticides in groves. The second project, funded by agricultural initiative money, is looking at systematic evaluation of low risk insecticides in the southeast region of the U.S.

Following the presentations, two CARAT members were asked to offer their perspectives on what they heard in the presentations.

Sarah Lynch, World Wildlife Fund (WWF), began her comments with a description of two workshops that took place last summer on the critical elements of transitioning to biologically based pest management. The workshops were co-sponsored by a diversity of organizations who, in partnership, put the workshops on. Ms. Lynch observed that a diversity of interests worked together on a particular set of issues on the need to transition. While they did not agree on every issue, the group did agree on the importance of working collaboratively to transition to more biologically based pest management systems and the requirements of the FQPA. In her presentation, she recognized the importance of setting measurable goals and timetables, tracking reductions in risk over time, and sharing success stories. Additional details on her presentation are in the transcript for the meeting on the EPA web page.

Steve Balling, Del Monte Foods, explained that Del Monte has been involved in trying to implement IPM for at least 13 years. In that time they tried a number of different approaches to IPM in an effort to develop a stable pest management system. They found two critical components to implementing IPM, one was motivation and the second was how to work effectively with the people in the field. Jean-Marie Peltier, California Citrus Quality Council, followed up on the importance of people management in the field and emphasized the need for USDA to look closely at the delivery system – the system of delivering information in the field - as a critical component of moving into IPM implementation.

Following these comments, Dr. Ehrmann explained that Meridian would summarize the key issues/elements of success and challenge from these presentations and other comments from CARAT members as tool for discussion on the second day of the meeting. The list is presented below in the section, *Key Issues Drawn from Examples of Transition*.

### **Public Comment**

Following are brief descriptions of public comments. Additional details on the comments are in the transcript for the meeting.

***Creseda Silvers, National Center for Food and Agricultural Policy*** – commented on a study co-authored by Leonard Genese and herself of the economic impacts of recent EPA regulatory decisions regarding agricultural pesticides, some of which are decisions related to FQPA and others are not. She observed that the practical and economic consequences of transition, such as economic impacts, are not being assessed. A copy of her paper is available on the EPA web site.

***Jim Craney, U.S. Apple Association and Minor Crop Farmer Alliance*** – clarified that the comments submitted by the Alliance to EPA and FDA on the channels of trade provision represented the concerns of 100 fresh fruit and vegetable growers from across the U.S. In addition, in response to an earlier comment by Marcia Mulkey, EPA, he observed that the process used to revoke the tolerance for propargite took four years, substantially longer than the revocation of methyl parathion.

***Fred Betts, Director of Regulatory Affairs for Eaton Bioscience and Biopesticide Industry Alliance*** – described the newly formed Alliance. He also stated that the Alliance believes that biopesticides offer significant solutions for transition and reassessment issues.

*Jeff Wilson, Vegetable Farmer from Ontario, Canada and member of the Minor Crop Farmers Alliance* – expressed concern that emphasis in IPM toward reductionism will become problematic when the real need of the farmer is greater than the call for reduction. The second challenge he recognized was that consumers do not understand the relationship between their demand for quality and the pesticides that are necessary to achieve that quality. He also suggested that EPA apply a more reasonable timeframe for producing results. In addition, he observed that, with the channels of trade provision, there was a potential for perennial crops to have levels of detection two or three years following deregulation in the U.S.

After the public comments, Dr. Ehrmann invited additional questions and comments. Ms. Mulkey offered a clarification regarding EPA's decision on methyl parathion. She noted that the registration is cancelled for the technical grade products however the registrations for the end use products expire in two years when the use restrictions and existing stock is used up. A CARAT member requested the dates and times for the upcoming workshops on worker risk in California and Florida. Ms. Mulkey committed to providing this information and clarified that the workshops were the reassessment of the implementation of the worker protection standard.

### **Closing Comments**

Dr. Ehrmann turned to the Co-Chairs for closing remarks. Mr. Rominger thanked participants for the good discussion and commented that he looked forward to the discussion the following day and input on a process for getting the input CARAT members hope to provide. Mr. McCabe echoed these comments and observed that, while there was concern about how conducive this meeting format is to member's ability to advise, he felt very informed by the discussions of the day and looked forward to hearing ideas on how to make better use of this and other fora.

### **THURSDAY, October 12, 2000**

Dr. Ehrmann began the meeting with a review of the agenda for the day. He then turned to Mr. McCabe to begin the discussion on key issues drawn from the examples on transition.

Mr. McCabe commented that the presentations from the previous day were informative and provided insight into the scope of the challenges faced in transition. He referred CARAT members to the following summary of some of the key issues that came up in yesterday's discussion on transition as a basis and a tool to continue the discussion on transition. Mr. McCabe asked CARAT members to think of how CARAT can help with the next steps in transition. Dr. Ehrmann added to Mr. McCabe's comments and reiterated that the summary reflected issues Meridian distilled from yesterday's discussion. He stated that the summary was not an exhaustive listing of the group's comments and was not meant as a formal statement of the CARAT.

CARAT members proceeded to comment on the summary. The following summary has been modified to reflect their comments. Additional highlights of the discussion follow the summary.

### **Key Issues Drawn from Examples of Transition**



### **Vision**

1. It is helpful to have a vision for the transition process that is relevant to the crops being addressed.
2. Stakeholders who are affected by transition should develop the vision.
3. The vision should capture where we are trying to go with agriculture in the 21<sup>st</sup> Century.
4. It should prepare stakeholders to address all of the issues ahead, including FQPA, OPs, carbamates, offshore issues, etc.
5. It should address the need to protect children, workers and consumers; the environment domestically and internationally; and the farms.
6. The vision should be communicated to all stakeholders.

### **Measurable Goals**

1. Establish measurable goals and objectives for the transition process so that progress can be assessed and evaluated. The goals and objectives should address the evolutionary nature of transition.
2. Need to be able to measure/understand the economic implications of new pest management programs.
3. Include profitability as one of the measurable goals.

### **Research**

1. Need to develop more tools “that work” in the field.
2. Tools need to be effective and economically viable.
3. Need to be able to test new pest management programs in the field.
4. Need to evaluate the effectiveness of new pest management programs on secondary pests.
5. As we research for transition, we should also be cognizant of the unintended consequences of the replacement alternatives.

### **Resources**

1. Resources are needed for research, field-testing and implementation and evaluation of pest control alternatives. Land Grant Universities are key to these research efforts.
2. Resources are necessary for education, training and outreach.
3. Resources within the agencies need to address IR-4 submissions and inert ingredient issues.
4. Because resources are limited, resource needs should be prioritized and emphasis placed on critical issues. One area of emphasis might be partnering efforts.

### **Education, Training and Outreach**

1. Educate stakeholders on the vision and goal for transition processes.
2. Farmer-to-farmer education in the field is critical – people listen to the experiences of their neighbors.
3. Information about alternatives needs to be readily accessible to growers and they need time to understand and learn how to utilize new pest management programs effectively.
4. Outreach activities could include speakers at monthly meeting, seminars, field training, newsletters, and websites.
5. Growers may need help learning how to assess farming practices to identify where they can improve their practices and develop strategies for transition.
6. Growers may need to be educated about what IPM and transition really mean to help insure that they are focusing their efforts effectively.
7. Training and development for pest management consultants is important.
8. Share successes in addition to lessons learned.

9. Training for pesticide applicators is important.
10. Education, outreach and training on how to address real health risks is important.

### **Models for Stable Pest Management Systems**

1. Make better use of what we have as new pest management programs.
2. Work with the present infrastructure – there is no need to invent a new system for delivering information on IPM.
3. Models may need to be flexible and allow the use of different tools to fit the circumstances.
4. There may be a role for OPs and other prescriptive uses in pest management systems.
5. Models need to be adaptable in order to address different regional complexities (e.g., climatic differences, pest intensity and diversity, pest dynamics with changes in control, disease, etc.)
6. Models need to address future changes in pest control alternatives that will result when cumulative risk assessments are performed.
7. Models should factor in resistance management.

### **Measurement, Documentation and Evaluation**

1. Evaluate pest management practices to determine where new pest management programs are necessary.
2. Evaluate the effectiveness of new pest management programs.
3. Compare economic differences (establish economic threshold) between pest control alternatives in the evaluation process. Without this comparison, it will be hard to motivate growers to consider alternatives.
4. Demonstrate and document successful implementation of alternatives in the field and measure progress towards goals.

### **Working with Stakeholders**

1. IPM stands for “integrated people management.” There is a need to determine how best to work with all stakeholders in the transition process.
2. Engaging grower in IPM and other alternatives is critical.
3. Grower and industry buy-in to the transition process is essential. Key is providing the grower with a viable reason for transition – why?

### **Delivery Systems**

1. Need a better way to deliver information about alternatives and implementation of them to growers in the field.
2. Need staff to be available to facilitate transition activities effectively.

### **Strategic Partnerships**

1. It is very helpful to involve a broad range of stakeholders so that diverse interests can contribute to and support the process
2. Partnerships are important for successful transition.
3. Partnerships can be diverse and need not be restricted to partnerships between growers and Land Grant Universities.

### **Economics and Marketability**

1. Pest control alternatives need to be effective and economically viable.
2. There is a need to harmonize domestic and international tolerances. Without harmonization, the

substantial export market may be jeopardized when tolerances do not mesh and produce is rejected.

**Timing**

1. Timeframe needs to allow for planning and availability of viable alternatives.
2. Need to develop sufficient viable alternatives in preparation for changes in pest management that may result from cumulative risk assessments.
3. Timeframe must recognize regulatory and other variables.

**Risks and Incentives**

1. Develop incentives to help growers adopt the new risks inherent with new pest management programs.

Many CARAT members applauded the presentations on transition “in the field” where the “rubber meets the road.” One participant commented that it would also be helpful to hear a similar presentation on the potential benefits of transitioning from OPs. In general, CARAT members felt the preceding summary of key issues reflected the information from the presentations and the discussion following. Specific corrections or suggestions for change were incorporated in the summary. A number of participants felt the summary supported the need to spend more time as a Committee on some of the critical issues – perhaps through workshops or work groups. While other CARAT members agreed with the need to focus in depth on selected issues like transition and cumulative risk, they felt the CARAT meetings were the appropriate forum for those discussions.

It was apparent to some that the stakeholder community cannot rush into transition. It was necessary first to have greater clarity on what transition is and what the alternatives are. One individual suggested that the CARAT use the definition of transition developed and agreed on by the Risk Mitigation Work Group of the TRAC. She also reiterated that it was necessary to agree on a vision and communicate to all stakeholders where the U.S. is trying to go with agriculture in the 21<sup>st</sup> Century. Another member noted that, not clearly reflected in the listing of key issues, is the fact that transition has to take place on the farm or at the user level.

One individual stressed that the current models for pest management are better adapted to some crops than others. For those crops that are not well adapted, it is essential to continue developing new technology for transition and not rely on the “old mousetrap.” In this context, he asked for the status on the Plant Pesticide Rule. Mr. McCabe responded that the Rule was moving forward and was under consideration by the OMB. He noted that it was a complicated rule that was further complicated by public perception on how EPA deals with issues like genetically modified products. Mr. McCabe could not be explicit about a timeframe for finalizing the Rule, but hoped it would be by the end of this administration. Ms. Wayland clarified that they hoped the last part of the Rule would be finalized in this timeframe, but they planned to ask for additional comments on other sections of the Rule.

Another CARAT member felt that the list of key issues implied that OPs would not be part of the pest management schemes of the future. She commented that retention of some uses of OPs is important and that OPs in IPM program may have a niche. Mr. Aidala responded that, while there has been a fear throughout the TRAC and CARAT processes that transition will mean the end of OPs, based on the risk assessments of individual OPs to date, this fear has not manifest. He noted that a similar anxiety exists in regard to cumulative risk, but again, that does not mean that OPs will go.

One individual cautioned that, in addition to transition, there is still a lot of work to be done on

reassessment, including the resolution of the unresolved science policy issues. Another participant suggested that, in view of the proscribed duration of the CARAT, it would be important for EPA and USDA to identify the most critical issues to be covered by CARAT. These goals and priorities should allow for the CARAT to address these areas within the timeframe of its existence.

Following the group's comments, Dr. Ehrmann invited Mr. McCabe to summarize what he heard from the discussion. Mr. McCabe felt that the discussion and the summary document underscored the fact that there are a lot of issues relating to transition that need to be addressed. He reflected that, as there are a number of issues to be addressed, the challenge is in determining the appropriate venues in which to address the issues.

### **Next Steps on CARAT Work Process**

Mr. McCabe observed, in its emphasis on work groups, the group was struggling with how to most productively address outstanding issues in more detail than the current CARAT structure allows. While the option of using work groups to do this is labor and resource intensive from all points of view, he noted that work groups or some other similar format might be useful to get into more depth on some of the core issues. He proposed two work groups, one on the key elements of transition (e.g., research, funding, farmer buy-in, measurement, etc.), and the second on cumulative risk, including the public participation process. Mr. McCabe also suggested that workshops be used initially to address issues like drinking water, occupational and worker risk. He felt that these targeted efforts would help to address the need for more in depth coverage of selected issues in a way that moderates the use of everyone's valuable time and resources. He suggested that the next CARAT meeting would not occur before February 2001. Possible agenda items for the next CARAT meeting would be decided in the future, however they might include children's protection on what we're trying to achieve and what the issues are, and non-agricultural pest control issues – a discussion and presentation help look beyond OP pesticides of focus.

Mr. Rominger agreed with the process Mr. McCabe's proposed for moving forward. He suggested that, because of the transition in administration, it might be more realistic to expect the next CARAT meeting in March 2001. In the interim, work group or workshop activities might begin. Mr. Rominger then invited comments from CARAT members.

Many CARAT members were supportive of the proposed approach to addressing some of the critical issues, particularly cumulative risk and transition. One member commented that a workshop might be appropriate to address the topic of transition. She suggested that the workshop would provide the opportunity to include the perspectives of others not on the CARAT whose input would be valuable for the discussions. In addition, she suggested that the workshop be held at a time of year that did not conflict with harvest. Another individual suggested adding residential risk to the list of potential workshop or work group topics. As a follow-on to this comment, Ms. Mulkey noted that the Pesticide Programs Dialogue Committee (PPDC) is another venue in which some of these issues might be addressed. In particular, she noted that the PPDC had at least two work groups, one of which was addressing rodenticides and the other of which is addressing inert disclosure issues. Several members expressed reserve about work groups. One individual suggested using breakout groups at the CARAT meetings as an alternative.

Mr. Aidala took the opportunity to ask CARAT members for their input on the size of the work groups. CARAT members suggested work groups of between 10 and 15 people.

## Update on Drinking Water Protocol

Susan Wayland, Acting Assistant Administrator, OPPTS/EPA, introduced Denise Keehner, Division Director, OPP and soon to be the Director of the Biological and Economic Analysis Division (BEAD), for an overview of the past, present, and future activities, approaches and improvements in regard to drinking water. Ms. Keehner provided the group with an overview of her career at EPA and the circumstances under which she was to assume the Directorship of BEAD. Before introducing the presenters, Ms. Keehner noted that drinking water is fundamentally different from food in ways that affect how risk is assessed in the following ways: people obtain their drinking water locally, the amount of water consumed exceeds that of any other commodity; conventional water treatment in the U.S. does not substantially reduce the risk of the occurrence of pesticides in water; and certain pesticides will be an issue in certain locations. Ms. Keehner then introduced Dr. William Wilber, U.S. Geological Survey (USGS) and Nelson Thurman, OPP/Environmental Fate and Effects Division (EFED)/EPA for an overview of the occurrence of pesticides in drinking water.

Dr. Wilber provided the group with a summary of what USGS knows about the occurrence and distribution of pesticides in streams and ground water in the U.S. as learned from the first part of the National Water Quality Assessment Program (NWQA). He described the sampling program and explained that they measure physical, chemical and biological parameters, in addition to 80 of the 120 most commonly used pesticides. Dr. Wilber then summarized the results of the study and explained that, through the program they have confirmed that pesticides are present in our surface and ground water across a wide geographic range year round. He explained that it was difficult to interpret the results of the study in part because there are very few standards or guidelines for pesticides to compare against. Dr. Wilber described some of the complexities of the occurrence of pesticides in water, including mixtures and breakdown products. He also commented on how USGS is coordinating with EPA on a number of issues that he hoped would lead to better information and the reduction of uncertainty on exposure and estimating risk, including the use of predictive models and a national scale drinking water monitoring program.

Nelson Thurman, OPP/EFED/EPA, provided the group with an overview of how information like the results of the NWQA program are used to assess drinking water. He noted that no single study provides a complete picture. Drawing on the information and observations from Dr. Wilber's presentation, Mr. Thurman described the use of screening models to estimate pesticide concentrations in drinking water and explained how the screening models evolved from ecological exposure assessments to using an index reservoir in the assessment. As a means of checking the effectiveness of the models, the screening results were compared against monitoring data. Mr. Thurman noted that the results of the screening process of pesticides undergoing tolerance assessments show that most of the pesticides passed the screen, and the few that did not were of concern in surface water.

Dr. Ron Parker, OPP/EFED/EPA, described some of the tools and methods EPA is developing beyond the screening level. Recognizing the need to link the population exposed to concentrations of pesticides to help evaluate the scale of exposure, Dr. Parker described USGS NWQA computer simulations used to estimate pesticide concentrations at community water system locations. Preliminary indications are that the simulations work, and the methodology has been endorsed by the SAP.

Dr. Rudy Pisigan, OPP/EFED/EPA, provided the group with an overview of the impact of water treatment on pesticides. He summarized the results of a literature review on processes used to remove pesticides from raw water. Dr. Pisigan noted that there was very little data available on treatment of pesticides in water. Of the available treatment technologies, carbon adsorption and membrane treatment have the



highest removal potential. He commented that the water softening and chlorination processes might produce harmful byproducts with pesticides that need to be accounted for in the treatment process. Dr. Pisigan advised CARAT members to expect a paper from EFED on the effects of water treatment for review soon.

After Dr. Pisigan's presentation, Mr. Jennings commented on the related interagency process on developing a better way to predict drinking water concentrations. He explained that a steering committee was formed involving EPA, USGS and USDA, to lead effort. The steering committee is considering forming two work groups as part of the committee: one to address model development and refinement and data required to validate the model, and the second to focus on ancillary data. Mr. Jennings added that the Pesticide Data Program would help the efforts of the committee through its emphasis on drinking water monitoring in 2001.

At the close of the presentations, CARAT members provided the following comments.

- ▶ When reviewing benefits and tradeoffs between treatment and prevention consider costs too.
- ▶ How will land use information be obtained to accurately represent specialty crop predictors? Ms. Keehner responded that this is one of the challenges the two working groups referenced by Mr. Jennings would face, and it will be important to involve knowledgeable people in that process.
- ▶ Continued emphasis of interagency interaction, farm education, and cultural practice is critical.
- ▶ Include in the model a way to look at what can be done about risk mitigation.
- ▶ Is there any external coordination with other efforts like the Clean Water Act and Total Maximum Daily Loads? Ms. Keehner responded affirmatively. Ms. Mulkey added that EPA is working to improve its capacity to engage with the agricultural community across environmental issues like these by integrating across its programs.

### **Public Health Issues**

Arnold Layne, OPP Public Health Official, Chief, Insecticides Branch, Registration Division, OPP/EPA, provided the group with an overview of public health pesticide activities. Dr. Layne noted the formation of a public health steering committee and some sub-working groups that were formed in 1998 to help ensure the full implementation of the provisions of FQPA. He referenced Paper # 2-6, the *Memorandum of Understanding (MOU) between EPA and the Centers for Disease Control and Prevention (CDC)*, which memorializes these and other activities taking place within the framework for collaborative efforts to implement the public health provisions of the FQPA. The EPA and CDC steering committee has developed mosquito control fact sheets regarding the West Nile virus. Future activities will include serving as the review body for registration fee exemption requests and coordinating expedited chemical review. Activities will also include the CDC, with the assistance of EPA, conduct studies to fill public health related data gaps.

Following the presentation, CARAT members provided comments. One member requested clarification on why the MOU was not more explicit about CDC's involvement in data collection. Mr. Layne agreed that the language in the MOU was not explicit on this point but there was discussion with CDC on data collection. The member stressed the importance of including CDC in the dialogue, particularly in any work group or workshop on how the risk assessment process and transition are integrated. Another observed that CDC was not funded for any pesticide involvement. Mr. Layne acknowledged this fact and commented that the lack of funding prevents them from proceeding with a data development program.

The group discussed the status of the list. One participant requested an update on when the list would be

final. Mr. Layne responded that the list would be final this month after review by senior management. The participant also wanted a characterization of comments on how the list was generated and the content of the list. Mr. Layne explained that EPA approached the list initially as a characterization of the significant public health pests because the number of individual pests was quite large. Preliminary response to the list was that it was too short and that it should be de-linked from many of the FQPA provisions. The individual commented that, once the list is finalized, there would be more activity in the area of waiver requests for public health pesticides.

Mr. Layne was asked to explain EPA's work with CDC on other issues including labeling. Mr. Layne explained that EPA decided to discuss selected issues with CDC that are outside the scope of the law on public health pesticides, as they might relate to implementing some of the provisions of FQPA. One of the issues is labeling on insecticide or public health products.

One CARAT member supported the idea of EPA detailing an individual to CDC and felt that would be a way to "jump start" their involvement.

### **Public Comments**

***Rich Banonow, University of Massachusetts Extension Service and member of the Massachusetts Pesticide Control Board*** – felt that the CARAT forum did not provide a good opportunity for specific advice and that workshops or work groups would provide a more effective forum for input. He emphasized that spraying is only one of many tools for pest management. There is also a critical need for research on new chemistry, time to adjust to new products, and grower education. He also commented on market dynamics and the politics of risk.

***Ed Gray, Formerly of the EPA Office of General Council*** – commented on how the assumption that while aggregate exposure may be reasonable for most compounds, the challenge will come with cumulative risk. He noted that the statute is not the same for aggregate and cumulative risk, and that the statute does not require the assessment of cumulative exposure in the same way as it requires the assessment of aggregate exposure. He suggested that focusing on options instead of mandates could mitigate many of the perceived challenges.

***Jeff Wilson, Vegetable Farmer from Ontario, Canada and member of the Minor Crop Farmers Alliance*** – expressed concern about NAFTA and how regulatory decisions in any one of the abutting three countries could impact the others. He encouraged everyone to work together in this regard. Mr. Wilson then followed up in more detail on his comments from the previous day on channels of trade, the status of OPs, and IPM transition. Additionally, he saw a danger in linking pesticide environmental improvement with market potential, and cautioned against this linkage without deeper analysis.

### **Closing Comments**

Mr. McCabe thanked CARAT members for being part of the process. He observed that, based on the updates at the meeting, much progress has been made in the implementation of FQPA. The process is and will continue to be an open one, where the advice of CARAT members is sought and valued. Mr. McCabe commented that, as plans for the next CARAT meeting and possible workshops and work groups evolve, the process for input and the information necessary for the agencies to do their jobs, will continue to improve.